

WHAT IS CLAIMED IS:

1. An occupant detection system for a motor vehicle, comprising:

a first occupant detection device which is arranged in a vehicle seat;

and

a second occupant detection device; wherein

the second occupant detection device comprises a first electrode arranged in the vehicle seat and a second electrode arranged in a foot well associated with the vehicle seat;

an electrical coupler variable associated with the two electrodes is determined by means of an electrical field applied between the electrodes; and

the electrical coupler variable and a variable which is determined by the first occupant detection device are used to determine whether the vehicle occupant is a child, whose legs do not extend to the vehicle floor, or whether the vehicle occupant is an occupant whose legs extend to the vehicle floor.

2. The occupant detection system according to Claim 1, wherein the electrical coupling variable is an electrical capacitance , which is associated with a

capacitor formed by the first electrode arranged in the seat and the second electrode arranged in the foot well.

3. The occupant detection system according to Claim 1, wherein the first electrode, which is arranged in the seat, is a part of the first occupant detection device.

4. The occupant detection system according to Claim 3, wherein the second electrode of the second occupant detection device is a part of a third occupant detection device, which is arranged in the foot well.

5. The occupant detection system according to Claim 3, wherein the first electrode is arranged in a region within about 2 cm below the seat surface.

6. A method for determining whether a vehicle occupant is a child whose legs do not extend to the floor of the vehicle, said method comprising:

providing a first occupant detection device arranged in a seat of said vehicle;

providing a second occupant detection device comprising a first electrode arranged in the vehicle seat and a second electrode arranged in a foot well associated with the vehicle seat;

applying an electric field between the two electrodes of the second occupant detection device;

determining a coupler variable associated with the two electrodes by sensing the electric field;

using the electric coupler variable and a variable determined by the first occupant detection device to determine the size of an occupant of the vehicle seat.

7. The occupant detection system according to Claim 6, wherein the electrical coupling variable is an electrical capacitance, which is associated with a capacitor formed by the first electrode arranged in the seat and the second electrode arranged in the foot well.

8. The occupant detection system according to Claim 6, wherein the first electrode, which is arranged in the seat, is a part of the first occupant detection device.

9. The occupant detection system according to Claim 8, wherein the second electrode of the second occupant detection device is a part of a third occupant detection device, which is arranged in the foot well.

10. The occupant detection system according to Claim 8, wherein the first electrode is arranged in a region within about 2 cm below the seat surface.